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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/722,346	11/26/2003	Shinya Tokunaga	61282-048	4744
7590	08/16/2005			EXAMINER
MCDERMOTT, WILL & EMERY 600 13th Street, N.W. Washington, DC 20005-3096				SIEK, VUTHE
			ART UNIT	PAPER NUMBER
			2825	

DATE MAILED: 08/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/722,346	TOKUNAGA ET AL.	
	Examiner Vuthe Siek	Art Unit 2825	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 26 November 2003.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-23 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 07 April 2004 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>11/26/03</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This office action is in response to application 10/722,346 filed on 11/26/2003.

Claims 1-23 remain pending in the application.

Drawings

2. Figure 25, 26A and 26B should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-23 are rejected under 35 U.S.C. 102(e) as being anticipated by Pack et al. (US 2004/0133369 A1).

5. As to claim 1 and 21-23, Pack et al. teach substantially similar claimed limitations of a method and apparatus of inspecting a photomask for a semiconductor integrated circuit (IC) formed based drawing pattern data (Fig. 1-8 and its description) comprising classifying a drawing pattern of the semiconductor IC into a plurality of ranks in accordance with a reference (shape of a feature) depending on a feature of the drawing pattern (classifying or grouping mask data based on its context information and its priority/order/rank) and extracting the same; determining inspection accuracy for each of the ranks; and deciding quality of the photomask depending on whether the determined inspecting accuracy is satisfied fro each drawing pattern thus extracted (Please see 0031,0032, 0033, 0034, 0037, 0038, 0040, 0041, 0042, 0048, 0049, 0051, 0052, 0053, 0056, 0057, 0058, 0059, 0061, 0062, 0063, 0071, 0081, 0082, 0083, 0084, 0085, 0086, 0088, 0090, 0092, 0094, 0098, 0105, 0106, 0107, 0108, 0109, 0111, 0115, 0123, 0124, 0125, 0128, 0130, 0131, 0132, 0133, 0135, 0139, 0157, 0158, 0159, 0161, 0162, 0163, 0165, 0166, 0167, 0168, 0170, 0172, 0181, 0188, 0189, 0190, 0191, 0192, 0193, 0194, 0195, 0196, 0197). It is noted that in order to inspect each of the drawing pattern feature of the semiconductor according to its rank, order or priority, the pattern feature must be developed or extracted.

6. As to claims 2-11, Pak et al. teach classifying the drawing pattern into a plurality of ranks and to extract the same based on contextual information that that be added and priority meaning depending on a circuit-functional feature of a pattern formed by the drawing pattern (at least see 0042, 0044, 0045, 0180, 0181); depending on whether the pattern is a dummy pattern (at least see 0007, 0082, 0108); depending on a pattern

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adjacent to the drawing pattern is a dummy pattern (at least see 0073, 0074, 0131); depending on whether the pattern has the same node (see at least 0034, 0037, 0038); depending on the feature of the shape of the pattern (at least see 0039); depending on a distance from the closest pattern, a distance from a corner of the pattern (at least see 0052, 0057, 0067, 0083, 0128); depending on the reference for each pattern, reference for each pattern edge, reference for each area (at least see 0032, 0038, 0039).

7. As to claims 12-19, Pack et al. teach changing an accuracy condition depending on an increase or decrease in pattern width (at least see 0233), relaxing the accuracy condition when the pattern is the dummy pattern, further relaxing the accuracy condition when a pattern adjacent to the pattern is the dummy pattern; relaxing the accuracy condition when two patterns having the same node based on a pattern in the same layer, different layers; changing the accuracy condition depending on whether one contact array is/are taken (patterns are classified as critical or non-critical, 0040, 0051).

8. As to claim 20, Pack et al. teach the feature is a relational expression of a manufacturing defect density and a manufacturing defect size and classifying the pattern into two ranks (rank/order/priority) depending on a critical point determined by an intersection of the relational expression of the manufacturing defect density and the manufacturing defect size in a photomask and a relational expression of a pattern are weighted by a manufacturing defect generation probability on a pattern and the manufacturing defect size is exceeded based on the critical point (at least see 0036, 0037, 0039, 0041, 0044, 0045, 00623, 0063, 0064, 0065, 0066, 0067, 0070, 0125, 0126, 0159, 0165, 0192, 0194, 0229, 0230, 0233).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vuthe Siek whose telephone number is (571) 272-1906. The examiner can normally be reached on Increase Flextime.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Smith can be reached on (571) 272-1907. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Vuthe Siek



VUTHE SIEK
PRIMARY EXAMINER